ZNC-3051-Y Pressure Transmitter
User Manual

Address; No.12 yard in the yard of Outer Ring Industrial Company, Fujin Road, Zhongbei Town, Xiqing District, Tianjin, China Zip code: 300380 Telephone: 008617320288925
WEB: https://www.zinacainstruments.com/ E-mail: zinacaoverseas@gmail.com

Product Usage:

Commonly used in a pressure detection, transmission instrumentation, widely used in a variety of industrial automation environment, involving water conservancy and hydropower, railroad transportation, intelligent buildings, production automation, aerospace, military, petrochemical, oil wells, electric power, ships, machine tools, pipelines and many other industries.

I. OVERVIEW

ZNC-3051-Y pressure transmitter is a kind of pressure transmitter with dexterous appearance, stable measurement and high accuracy. There are three kinds of pressure measurement methods: gauge pressure and absolute pressure, negative pressure. It adopts the most advanced diffusion silicon sensor and its manufacturing process to ensure the best quality performance and long-term stability. Free on-site configuration through the three keys, you can adjust the zero point, full scale on-site. And can be installed with high contrast with backlight LCD display, and a variety of process connectors.

II. Product characteristics

■Easy to install, can be installed directly, can also be mounted with bracket;
■High accuracy, high stability, high reliability, strong resistance to frequency interference;
■Gauge pressure, absolute pressure, negative pressure can be measured;
■Zero point can be migrated, the range can be adjusted;
■Support group network applications;

III. Instrument parameters

Measurement range	-0.1Mpa~100Mpa
Accuracy Class	0.075%，0.1%、0.2%、0.5%
Measuring medium	Liquid, gas or vapor
Operating power	External power ; 24VDC±15%, Ripple ≤±5%
Stability	Better than 0.1%
Output	4~20mA、RS485、HART、0~10V、1~5V
Diaphragm Material	SS316L (standard)
Medium temperature	-20℃～350℃
load resistance	≤ 1000Ω
Process connection material	304, SS316, PTFE
Process connection material	SS304 SS316L
Table header type	Display, Explosion-proof
Protection class	IP65

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IV. Instrument Selection

Model										Note
ZNC-Y	-□	/□	/□	/□	/□	/□	/□	/□	/□	
Type	201									Standard type
	202									Compact type
	3051									Smart type
Measurement range		L								-0.1Mpa～100Mpa(This range is the minimum and maximum measurement value, the order needs to provide the specific range range)
Pressure form			A							Absolute pressure
			G							Gauge pressure
Output form				1						4~20mA
				2						RS485
				3						Hart
				4						1~5V
				5						0~10V
Accuracy Class					P5					0.5%FS
					P2					0.2%FS
					P1					0.1%FS
					P05					0.075%FS①
Connection method						1				M20×1.5 Male thread (standard)
						ST				Special threads, to be specified
						DN25				DN25 Flange Flat Diaphragm②
						DN50				DN50 Flange Flat Diaphragm②
						DN80				DN80 Flange Flat Diaphragm②
						DN100				DN100 Flange Flat Diaphragm②
Display Type							N			Non-display
							E			LED Four-digit display type
							C			LCD Five-digit display type③
Electrical connection								1		Wiring terminal④
								2		Hirschmann⑤
								3		Aviation Plugs⑤
								4		Pilot cable⑥

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Flameproof	N	Non-explosive
	E	Flameproof Exd II CT6 Gb⑦

Remarks:

① 0.075% accuracy only 3051 models, and the range of 6KPa or more to meet

② Flange flat diaphragm sensors need to be matched with 201 or 3051 meter selection

③ Output signal for the HART, the display are LCD five-digit display type, and the meter body is adapted to the 3051 form

④ 201 and 3051 form of the meter body electrical connection is the form of the terminals

⑤ The electrical connection of the 202 meter body can be selected from the Housman connector or the aviation plug.

⑥ The lead cable is suitable for the above three types of meter bodies.

⑦ Only the 201 and 3051 meter bodies are available in the explosion-proof version.

Schedules

Coding	Note
S4	SS304 housings
S6	SS316 housings
J6	Catch material 316
JF	Catch material PTFE
Ta	Flange flat diaphragm tantalum material
H	Flange flat diaphragm Hastelloy material
M	Flange Flat Diaphragm Monel Material
Ti	Flange flat diaphragm titanium
Ni	Flange Flat Diaphragm Nickel
F	Flange flat diaphragm PTFE spraying
T1	Heat-resistant150℃
T2	Heat-resistant 250℃
T3	Heat-resistant 350℃
D	Foundation
SB	Monorail Table Bend
DB	Multi-turn table bends
ZF	Needle valve
E	Second valve group
ZJ	Mounting Bracket

V. Product Pictures

1. Y201 standard type

2. Y201 Digital display type

3. Y202 standard type

4. Y202 LCD display type

5. Explosion proof

6. Explosion-proof digital display type

7. T1 high temperature type

8. High temperature display type

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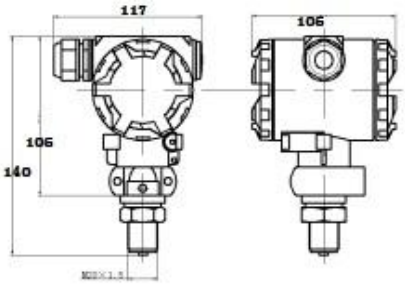
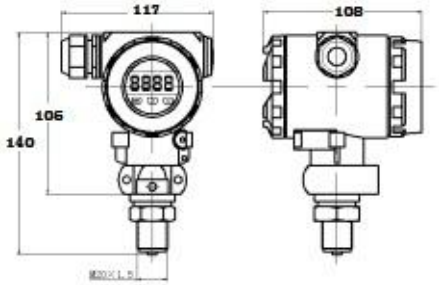
VI. External Dimensions

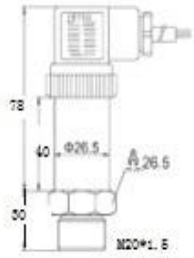
1. Y201



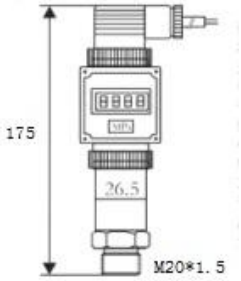
2. Y201 Display Type



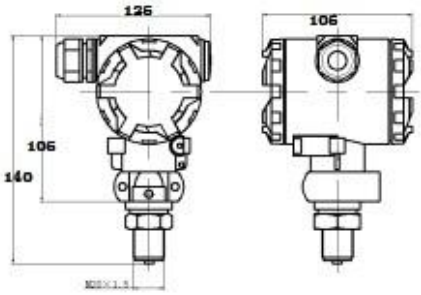
3. Y202



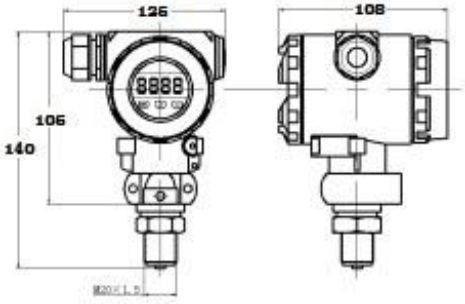
4. Y202 Display Type



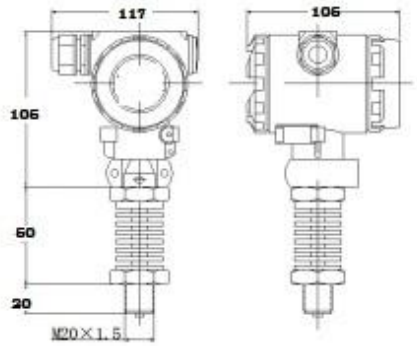
5. Explosion-proof type type



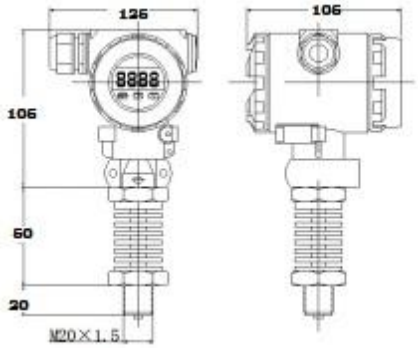
6. Explosion-proof display



7. High temperature type type



8. High temperature display



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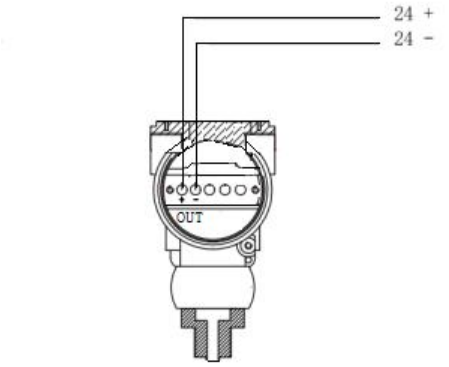
VII. Electrical connection diagrams

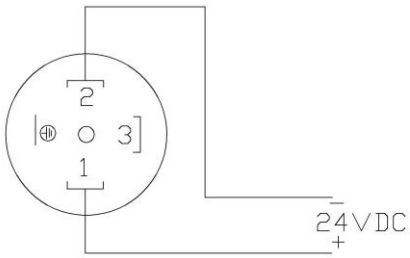
In order to connect the needs of a variety of specific instruments, the pressure transmitter output model and electrical connection as shown in the following diagram: 4 ~ 20mA analog signal output two-wire system

1. Standard:



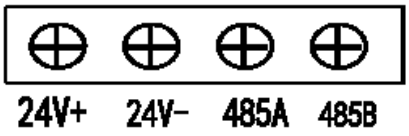
Two-wire 24VDC power supply, 4~20mADC output: OUT+—24VDC+
OUT- —24VDC-

2. Compact:



Two-wire 24VDC power supply, 4~20mADC output:
1—24VDC+
2—24VDC-

3. RS485:



Four-wire 24VDC power supply，RS485

4. HART：

Two-wire 24VDC power supply, HART output

VIII. Failure analysis

1. Calibrate zero point

Press key set, enter the menu LOCK, press key set, enter the password 0066, press key set, press key ↑ to page up to AdC1 item, press key set, press key ↑ to clear, then press key set, press key ↑ to page up to end, press key set, the operation is completed.

2. Phenomenon: High output

Potential Causes and Troubleshooting:

Pressure relief tube: Check for blockage.

Check that shutoff valve is fully open.

Check for gas in liquid line or liquid in gas line.

Check that the specific gravity of the liquid in the pilot line has not changed.

Circuit section check: Does the displayed pressure value match the current output, otherwise perform current retuning.

Power: Check the output of the power supply.

3. Phenomenon: Unstable output

Potential Causes and Troubleshooting Methods:

Parameter check: Check that the zero migration and range settings are correct.

Loop Wiring: Check for proper voltage to the transmitter. Check for intermittent short-circuit breaks and multi-point grounding.

Measured medium pulsation: Adjust the damping value.

Pressure conduit: Check whether there is gas in the liquid piping or liquid in the gas piping

Circuit part detection: Check whether the pressure value is stable by means of the gauge head, so as to determine whether the instability is caused by the sensor and the main circuit board.

4. Symptom: Low output or no output

Potential Causes and Troubleshooting:

Parameter check: Check for correct zero migration and range setting.

Primary element: Check the installation and operating conditions of the sensor. Any change in the characteristics of the measured medium will affect the output.

Loop wiring: Check that the voltage to the transmitter is normal. Check for short circuits and multiple ground points. Check for correct polarity. Check the loop impedance.

IX. Accessory charts

Name	Welding Base	Meter bend	Multi-turn table bends	Second valve group
Photo graph				
Name	Mounting Bracket	Needle valve	T1 (heat sink)	T2(high temperature capillary)
Photo graph				
Name	T3 (heat sink + capillary tube)	Standard stainless steel case	Display stainless steel case	Compact stainless steel case
Photo graph				

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